

Inside the Dependencies of SIP User Properties

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Credits

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Overview

To provision a user for **Office Communications Server** service, HMC 4.5 provides a procedure called Hosted Office Communications Server::CreateSipUser. The procedure sets AD properties for the target user, so that they can use OCS service. The properties set on the user are either provided by the caller or read from a user's plan which is of type OCSUserHosting.

However, we have to understand the dependencies between the properties. If a property violates these dependencies the request will not succeed.

This bulletin is to guide you through **what** these dependencies are and **why** OCS needs them. You can find more information about the properties in the [OCS SDK](#).

What are the dependencies?

Sample request for Hosted Office Communications Server::CreateSipUser

Here is a sample request:

```
<request>
  <data>
    <user>
      LDAP://CN=JohnC@AlpineSkiHouse.com,OU=AlpineSkiHouse,OU=ConsolidatedMessenger,
      OU=Hosting,DC=Fabrikam,DC=Com
    </user>
    <preferredDomainController>AD01.Fabrikam.Com</preferredDomainController>
    <primaryURI>Sip:JohnC@AlpineSkihouse.com</primaryURI>
    <planName>OCS User Plan</planName>
    <planOverrides>
      <enabled>true</enabled>
      <enabledForEnhancedPresence>true</enabledForEnhancedPresence>
      <enabledForFederation>false</enabledForFederation>
      <enabledForInternetAccess>true</enabledForInternetAccess>
      <publicNetworkEnabled>false</publicNetworkEnabled>
      <allowOrganizeMeetingWithAnonymousParticipants>true
    </allowOrganizeMeetingWithAnonymousParticipants>
      <meetingPolicy>Default Policy</meetingPolicy>
      <ucEnabled>true</ucEnabled>
      <ucPolicy>Default Policy</ucPolicy>
    </planOverrides>
    <archiveFederatedCommunications>false</archiveFederatedCommunications>
    <archiveInternalCommunications>false</archiveInternalCommunications>
    <ipPBXSoftPhoneRoutingEnabled>true</ipPBXSoftPhoneRoutingEnabled>
    <lineServerURI>sip:server01@pbx1.phones.fabrikam.com</lineServerURI>
    <lineURI>tel:+1425777777</lineURI>
    <remoteCallControlTelephonyEnabled>false</remoteCallControlTelephonyEnabled>
    <poolFQDN>pool.Fabrikam.com</poolFQDN>
    <poolTag>LabA</poolTag>
  </data>
  <procedure>
    <execute namespace="Hosted Office Communications Server" procedure="CreateSipUser"
    impersonate="1" >
      <before source="data" destination="executeData" mode="merge" />
      <after source="executeData" destination="data" mode="merge" />
    </execute>
  </procedure>
</request>
```

The parameters under `<planOverrides>` node are all optional. If specified they will override the values in the **OCS User Plan**. These are combined with the parameters outside the `<planOverrides>` and then passed to the managed layer.

Dependencies of the parameters

In the following are the dependencies between the various parameters used in the CreateSipUser request:

Table 1 Dependencies of the parameters

Parameter Name	Dependency
remoteCallControlTelephonyEnabled	If remoteCallControlTelephonyEnabled is true, then providing lineServerURI and lineURI are required and ucEnabled must be set to false

ipPBXSoftPhoneRoutingEnabled	If ipPBXSoftPhoneRoutingEnabled is true, then providing lineServerURI and lineURI are required ucEnabled must be set to true
ucEnabled	If ucEnabled is true, remoteCallControlTelephonyEnabled must be false

The dependencies are reflected in the User dialog box, titled “User Options”, in the OCS Admin Tools.



Figure 1 User Option Dialog

Here is the description of the dialog box:

Enable PC-to-PC communication only: all the three parameters are set to false

Enable Remote call control: remoteCallControlTelephonyEnabled is set to true

Enable Enterprise Voice: ucEnabled is set to true

Enable PBX integration: ipPBXSoftPhoneRoutingEnabled

Server URI: lineServerURI

Line URI: lineURI

Why do we have these dependencies?

The meaning of the parameters

To understand the dependencies between these parameters, we must first understand their meaning.

remoteCallControlTelephonyEnabled

The remoteCallControlTelephonyEnabled parameter controls whether the user is enabled for Remote Call Control (RCC). With Remote Call Control enabled, the user’s phone features are controlled by the private branch exchange (PBX). That means:

- Office Communicator has a control channel with the PBX system.
- The user's phone number is owned by the PBX system.
- The user's computer is not "the phone".

Office Communications Server will use RCC gateway and Computer-Supported Telecommunications Applications (CSTA) to communicate with the PBX system.

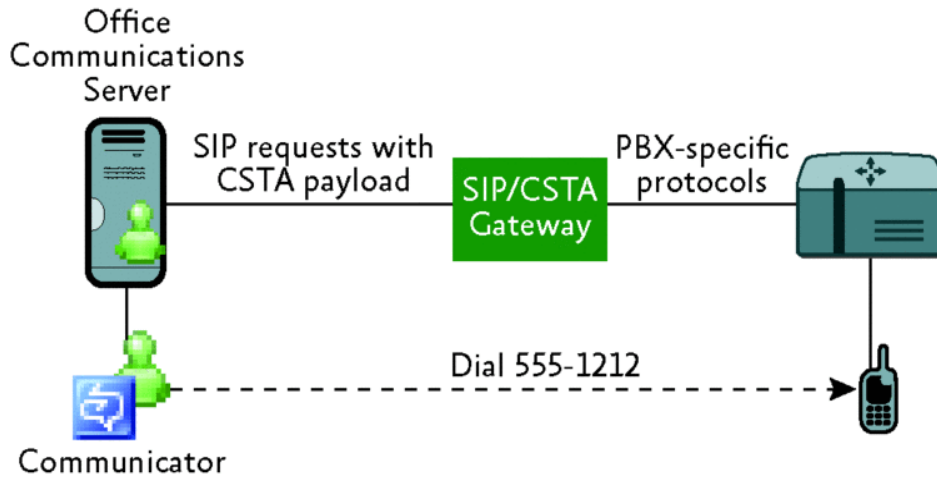


Figure 1, Remote Call Control Deployment

The deployment architecture is as shown here:

ucEnabled

The ucEnabled parameter controls whether the user is enabled for Enterprise Voice. This configuration enables OCS to be used as a soft phone, taking advantage of OCS's connectivity to PSTN via mediation servers. The main features include the following:

- Office Communicator is "the phone".
- The phone number is owned by Office Communications Server.
- Office Communicator publishes routing rules to Office Communications Server.
- Rich integration with Presence and Do Not Disturb features available.
- Additional forwarding features are available, including simultaneous ring options.

This is a new feature in Office Communications Server 2007.

Note: The feature OCS as your soft phone is not supported in a Hosted Environment as we haven't support OCS integration to the PSTN network.

ipPBXSoftPhoneRoutingEnabled

The ipPBXSoftPhoneRoutingEnabled parameter controls whether the user is enabled for PBX Integration. PBX Integration means that the calls are managed by both Office Communications Server and their legacy PBX system. This is typically known as Dual Forking with Remote Call Control in that either the user PBX phone or OCS soft phone is capable of making or answering calls.

With this feature enabled:

- Office Communicator and the PBX phone ring together.
- The user's phone number is owned by both the PBX and shared with Office Communications Server.
- The user can answer calls by using Presence integration.

This feature also requires a CSTA gateway to let the Office Communications Server to communicate with the PBX system.

You can refer to <http://technet.microsoft.com/en-us/magazine/cc194410.aspx> about Voice Deployment.

The Reasons for the Various Requirements

Remote Call Control and Enterprise Voice are very different in the way that the telephony calls are handled. Therefore, RCC and Enterprise Voice are generally considered mutually exclusive.

When PBX Integration is enabled with Enterprise Voice, RCC capabilities are exposed while still enabling OCS to act as a soft phone. This feature requires that both ipPBXSoftPhoneRoutingEnabled and ucEnabled be set to true.

Notes on LineServerURI and LineURI

The lineServerURI parameter is the SIP URI of the telephony gateway server (CSTA). This parameter is required for both Remote Call Control and IP PBX integration. This parameter is used to route the SIP messages to the correct CSTA gateway for the user. So it is required when either Remote Call Control or PBX Integration is enabled. If a user is only enabled for UC, but not enabled for PBX Integration, there is no need to set lineServerURI.

The lineURI parameter is the representation of the telephone number of the user. Remote Call Control uses the lineURI attribute to locate the user in the PBX system and allows for a wide range of different values starting with "sip:" or "[tel:](#)". When ipPBXSoftPhoneRoutingEnabled is enabled the lineURI provides a similar service but has tighter requirements accepting only value starting with "tel:". In both cases LineURI is required.

References

[Connecting Users with Office Communications Server 2007](#)

[Telephony Integration](#)

[Unified Communications Group Team Blog](#)

[MSFT SIPUserSetting class](#)

[Office Communications Server 2007 Enterprise Voice Planning and Deployment Guide](#)

Terminologies

OCS	Office Communications Server
RCC	Remote Call Control
CSTA	Computer-Supported Telecommunications Applications
PBX	Private Branch eXchange
PSTN	Public Switched Telephone Network
VoIP	Voice over Internet Protocol
UC	Unified Communications